

VABILO NA PREDAVANJE / INVITATION TO THE LECTURE

Prof. Devon A. Shipp

Department of Chemistry & Biomolecular Science, Clarkson University
Potsdam New York, U. S. A.

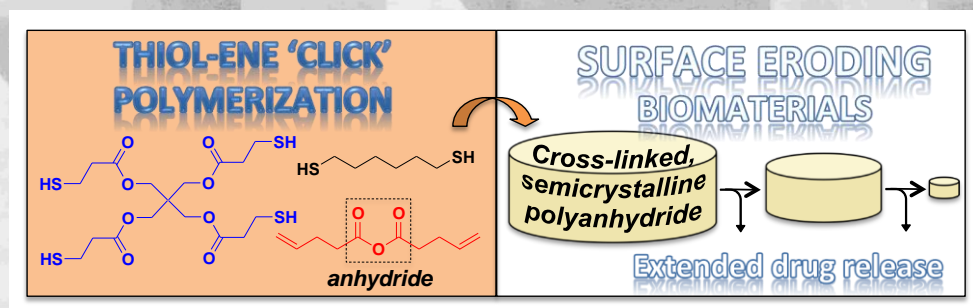
sreda / Wednesday, 20. 5. 2015, ob / at 13:00

**Velika predavalnica Kemijskega inštituta / Lecture Hall at the
National Institute of Chemistry; Hajdrihova 19, Ljubljana**

Surface Eroding Polyanhydrides from 'Click' Thiol-Ene Polymerizations

ABSTRACT:

Polyanhydrides have found a niche in the degradable polymer field largely because they often undergo surface erosion. Surface eroding polymers maintain both their mechanical integrity and shape, although exhibit a gradual loss in size, during degradation. This occurs because of the high reactivity of the anhydride group when compared to other hydrolysable linkages often used in degradable polymers, particularly polyesters. In contrast to acrylic networks made in the past, we have developed polyanhydrides based on thiol-ene polymerization, a step-growth mechanism of polymerization that can be applied to make materials that have relatively uniform network structure. Further, thiol-ene polymerization is robust, can be photo-, redox- or thermally-initiated and may use a wide variety of monomers. Thus, these have real potential in a variety of applications, including orthopedics and drug delivery. In this presentation it will be shown that thiol-ene polymerizations can produce elastomeric and semi-crystalline polyanhydrides that have controllable degradation rates, and this approach to network polyanhydrides can provide significant flexibility in tailoring characteristics such as crosslink density, functionality and hydrophilicity.



Biography:

Prof. Devon Shipp completed a B.Sc. (Hons) in chemistry (1993), and then Ph.D. (1998) at the *University of Melbourne* (Australia) under the supervision of Prof. David Solomon, Dr. Graeme Moad and Dr. Trevor Smith. He then accepted the Bayer Postdoctoral Research Fellowship at *Carnegie Mellon University* (Pittsburgh, Pennsylvania) with Prof. Kris Matyjaszewski. In 1999 he began his independent research career at *Clarkson University* in northern New York State where he currently full Professor. His research group focuses on new polymer chemistry, particularly for bio-related applications. He has published ~60 peer-reviewed papers, and currently is an Associate Editor for the *Australian Journal of Chemistry*. Presently he is a Fulbright Scholar in Slovenia, hosted by the *Slovenian National Institute of Chemistry* and the *Faculty of Chemistry and Chemical Technology at the University of Ljubljana*. His website URL is: www.clarkson.edu/~dshipp.

Vljudno vabljeni! / Kindly invited!

info: dr. Ema Žagar; ema.zagar@ki.si